SUPERFUND RESPONSE ACTION PRIORITY PANEL REVIEW FORM

Date Form Completed: 02/24/2012

General Site Information

Region:	Region 5	City:	Wyoming	State:	MI
CERCLIS EPA ID:	MID079300125		CERCLIS Site Name:	Spartan Chemical Company	
NPL Status: (P/F/D)	Final (F)		Year Listed to NPL:	1983	

Brief Site Description: *(Site Type, Current and Future Land Use, General Site Contaminant and Media Info, Site Area and Location information.)*

The Spartan Chemical Company (Spartan) is located on a five-acre parcel of land in an industrial park in the City of Wyoming, Michigan. Spartan was a bulk chemical transfer and repackaging plant from 1952 to 1991. Both aboveground and underground storage tanks were used to store chemicals at Spartan. During its operation, Spartan handled a variety of chemicals, including aromatic solvents, napthas, alcohols, ketones, ethers, chlorinated solvents, and lacquer thinners. Prior to 1963, the company discharged its wastewater into the ground.

In 1975, groundwater contamination was detected during dewatering operations at a Slagboom facility adjacent to the site. The groundwater was contaminated with various compounds including ethylbenzene, toluene, benzene, xylene, and 1,1,1-trichloroethane. At that time, Spartan was the only known handler of solvents in the area, so Spartan was thought to be the source.

In 1981, residential wells near the site were found to be contaminated with volatile organic compounds (VOCs). These wells were abandoned, and the residences were connected to the municipal water supply.

The United States Environmental Protection Agency (U.S. EPA) proposed the site for the National Priorities List (NPL) in December 1982 and finalized the site on the NPL in September 1983.

The area surrounding the site is heavily populated, with industrial, commercial, residential property and a school near the site. As of the 2010 census, the city had a total population of 72,125 making it the second largest community or city in West Michigan.

General Project Information

Type of Action:	Remedial	Site Charging SSID:	05EP
Operable Unit:	00	CERCLIS Action RAT Code:	RA002

Is this the final action for the site that will result in a site construction completion? X Yes ☐ No

Will implementation of this action result in the Environmental Indicator for Human Exposure being brought under control? X Yes ☐ No

Response Action Summary

Describe briefly site activities conducted in the past or currently underway:

The Michigan Department of Environmental Quality is the lead agency for the site and is finalizing the designs for the site.

Specifically identify the discrete activities and site areas to be considered by this panel evaluation:

For Spartan Chemical facility:

- excavation and off-site disposal of principal threat waste soils;
- soil vapor extraction for the mitigation of vapors;
- air sparging and soil vapor extraction for shallow ground water and soil treatment;
- in-situ chemical oxidation for source area groundwater;
- contingency for enhanced bioremediation, if necessary;
- monitored natural attenuation for groundwater.

For facilities and residences in areas adjacent to the Chemical facility:

- Concentrations detected in groundwater, soils, and soil vapor give a preliminary indication that vapor intrusion buildings near the facility may require mitigation. Evaluation of buildings construction near the facility regarding potential for vapor intrusion at nearby commercial businesses, residential areas and school will be completed March 2012, with air sampling and analysis expected to be completed by mid-April. Ground water, soil, and soil vapor data indicate that the nearby (upgradient) school property is not likely to have vapor intrusion above levels of concern. However, soil vapor concentrations near a commercial facility adjacent to the Spartan Chemical facility and volatile contamination in groundwater downgradient from the Spartan Chemical facility under some residences indicates greater concern.
- Institutional controls restricting groundwater use will be implemented as appropriate.

Briefly describe additional work remaining at the site for construction completion after completion of discrete activities being ranked:

The activities being ranked encompass all remedial action activities associated with the site. No additional work would be required for construction completion.

Response Action Cost

Total Cost of Proposed Response Action:

($ amount should represent total funding need for new RA funding from national allowance above and beyond those funds anticipated to be utilized through special accounts or State Superfund Contracts.)

$7,645,000

Source of Proposed Response Action Cost Amount:

(ROD, 30%, 60%, 90% RD, Contract Bid, USACE estimate, etc…)

Design documents

Breakout of Total Action Cost Planned Annual Need by Fiscal Year:

(If the estimated cost of the response action exceeds $10 million, please provide multiple funding scenarios for fiscal year needs; general planned annual need scenario, maximum funding scenario, and minimum funding scenario.)

FY2012: $5,176,000. FY2013: $780,000. FY2014: $721,000. FY2015: $631,000. FY2016: $191,000. FY2017: 146,000

Other information or assumptions associated with cost estimates?

Assumes 20% Contingency

Readiness Criteria

1. Date State Superfund Contract or State Cooperative Agreement will be signed (Month)?

The SSC was signed on February 3, 2010.

2. If Non-Time Critical, is State cost sharing (provide details)?

n/a

3. If Remedial Action, when will Remedial Design be 95% complete?

Completion of the 95% Design components are as follows

- Soil removal - completed,
  and
- AS/SVE – to be completed March 2nd.

These two design components are the elements necessary to start construction.

Additional 95% design components are also expected to be completed as follows:

- In-situ chemical oxidation – June 15, 2012 (implementation contingent on results of AS/SVE),
- Enhanced bioremediation – as necessary (implementation contingent upon results of other remedial activities).

4. When will Region be able to obligate money to the site?

Immediately upon receipt in Spring 2012.

5. Estimate when on-site construction activities will begin:

August 2012 (within 6 months upon receipt of funding)

6. Has CERCLIS been updated to consistently reflect project cost/readiness information?

Yes

Site/Project Name:	**Spartan Chemical**

Criteria #1 - RISKS TO HUMAN POPULATION EXPOSED (Weight Factor = 5)

Describe the exposure scenario(s) driving the risk and remedy. Include risk and exposure information on current/future use, on-site/off-site, media, exposure route, and receptors:

- Preadolescent exposed to soils in school area,
- Preadolescent exposed to soils in grassy area (i.e., trespassing),
- Site worker exposed to surface soils in industrial area,
- Site worker exposed to surface soils in concrete or grass areas,
- Adult residential use (exposure to soils in the concrete, grass, industrial or school areas, to groundwater,

and to intrusion of chemicals from soil and groundwater through a basement),
- Construction worker exposed to soils in concrete, grass, industrial, or school areas,
- Potential vapors into local schools and other structures.

Estimate the number of people reasonably anticipated to be exposed in the absence of any future EPA action for each medium for the following time frames:

MEDIUM	<2yrs	<10yrs	>10yrs
Soil	500+	500+	500+
Groundwater (for drinking water)	100	500	500
Vapor	250	500	500

Discuss the likelihood that the above exposures will occur:

The presence of principal waste threat wastes make it likely that exposure will remain into the future.

Other Risk/Exposure Information?

The school is adjacent to the site property.

Site/Project Name:	Spartan Chemical

Criteria #2 – SITE/CONTAMINANT STABILITY (Weight Factor = 5)

Describe the means/likelihood that contamination could impact other areas/media given current containment:

Trespassers are known to intrude on-site from the school; excavation will extend onto school property due to subsurface contamination on school property.

Are the contaminants contained in engineered structure(s) that currently prevents migration of contaminants? Is this structure sound and likely to maintain its integrity?

No

Are the contaminants in a physical form that limits the potential to migrate from the site? Is this physical condition reversible or permanent?

No – not permanent

Are there institutional physical controls that currently prevent exposure to contamination? How reliable is it estimated to be?

None currently

Other information on site/contaminant stability?

None

Site/Project Name:	Spartan Chemical

Criteria #3 – CONTAMINANT CHARACTERISTICS (Weight Factor = 3)

(Concentration, toxicity, and volume or area contaminated above health based levels)

List Principle Contaminants (Please provide average and high concentrations.):

(Provide upper end concentration (e.g. 95% upper confidence level for the mean, as is used in a risk assessment, or maximum value [assuming it is not a true outlier], along with a measure of how values are distributed {e.g. standard deviation} or a central tendency values [e.g., average].)

Contaminant	***Media**	****Concentrations**
PCE	ST, GW	1,000,000 ug/kg
1,3,5-Trimethylbenzene	ST, GW	240,000 ug/kg
TCE	ST, GW	460,000 ug/kg
Styrene	ST, GW	3,900,000 ug/kg

*(*Media: AR – Air, SL – Soil, ST – Sediment, GW – Groundwater, SW – Surface Water)*

*(**Maximum Concentrations: Provide concentration measure used in the risk assessment and Record of Decision as the basis for the remedy.)*

Describe the characteristics of the contaminant with regards to its inherent toxicity and the significance of the concentrations and amount of the contaminant to site risk. *(Please include the clean up level of the contaminants discussed.)*

State cleanup standards:

PCE – 100 ug/kg

1,3,5-Trimethylbenzene – 460 ug/kg

TCE – 100 ug/kg

Styrene – 2,700 ug/kg

Describe any additional information on contaminant concentrations which could provide a better context for the distribution, amount, and/or extent of site contamination. *(e.g. frequency of detection/outlier concentrations, exposure point concentrations, maximum or average concentration values, etc.....)*

Spartan Chemical Company facility is located within an area with light industry and commercial development. A school is adjacent to the property and upgradient from contaminated groundwater. A residential area is downgradient from the facility. The potential for vapor intrusion is presently based upon VOC soils, soil vapor sampling and groundwater data. Additional investigation for vapor intrusion in areas adjacent to high concentrations at the Spartan Chemical facility to contamination is currently underway.

Other information on contaminant characteristics?

None.

Site/Project Name:	Spartan Chemical

Criteria #4 – THREAT TO SIGNIFICANT ENVIRONMENT (Weight Factor = 3)

(Endangered species or their critical habitats, sensitive environmental areas.)

Describe any observed or predicted adverse impacts on ecological receptors including their ecological significance, the likelihood of impacts occurring, and the estimated size of impacted area:

None

Would natural recovery occur if no action was taken? ☐ Yes _X_ No
If yes, estimate how long this would take.

No.

Other information on threat to significant environment?

No additional ecological threats.

Site/Project Name:	Spartan Chemical

Criteria #5 – PROGRAMMATIC CONSIDERATIONS (Weight Factor = 4)

(Innovative technologies, state/community acceptance, environmental justice, redevelopment, construction completion, economic redevelopment.)

Describe the degree to which the community accepts the response action.

High. The community supports the action. The action will result in a construction completion and address remaining environmental indicator issues.

Describe the degree to which the State accepts the response action.

High. The state supports the action and is the lead on the project.

Describe other programmatic considerations, e.g.; natural resource damage claim pending, Brownfields site, use of innovative technology, construction completion, economic redevelopment, environmental justice, etc…

Upon completion of remedial action the site will be construction complete and the site could be reused for light industrial or commercial purposes.